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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket: ATM-2215-2

Appellants : Wilfried JUD et al.

Examiner : Monique Jackson

Serial No. : 10/083,110

Art Unit: 1773

Filed : 06/14/2001

For : STERILIZABLE COMPOSITE FILM

APPEAL BRIEF

Mail Stop Appeal Brief  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Appellants have appealed from the final Office Action of June 18, 2004 rejecting all of pending Claims 30 to 48. Appellants request reversal of the rejections.

(1) REAL PART IN INTEREST

The three appellants, who are individuals, assigned the parent of this application (recorded on 12/08/1999 at reel 010450, frame 0094) to Alusuisse Technology & Management Ltd., a corporation of Switzerland and having a principle place of business at Neuhausen am Rheinfall, Switzerland CH-8212. The corporate name of Alusuisse Technology & Management Ltd. was changed to Alcan Technology & Management Ltd. (recorded on 05/07/2002 at reel 012877, frame 0412). Alcan Technology & Management Ltd. is directly or indirectly owned/ controlled by Alcan Inc., a Canadian corporation and having its head office in Montreal, Canada. The real party in interest is Alcan Inc.

## (2) RELATED APPEALS AND INTERFERENCES

Appellants, appellants' legal representatives, and assignee do not know of any other appeals or interferences that will directly affect or have a bearing on the Board's decision in the pending appeal, except for the earlier appeal in U.S. Serial No. 09/505,713, filed on February 17, 2000, the same real party in interest [U.S. Patent No. 5,589,275 (Breitler et al.) is also involved].

## (3) STATUS OF CLAIMS

Claims 1 to 29 have been cancelled. Claims 30 to 48 are pending.  
Claims 30 to 48 are appealed.

## (4) STATUS OF AMENDMENTS

There are no pending amendments or outstanding office actions involving this appeal.

## (5) SUMMARY OF INVENTION

Appellants' invention is addressed to the problem of delamination of composite film that occurs under sterilization conditions (page 1, lines 3 and 20 to 25).

Appellants' claimed invention is a sterilizable composite film containing a barrier layer that is impermeable to water vapor and gases comprising a metal foil (8) and on both sides of the barrier layer at least one functional layer. The composite film has a layer structure containing one on top of the other (Figures 1 and 2).

There is (a) a first functional layer containing a first plastic film (5) that is a polyester or polyolefin or an extrusion layer of a polyolefin or one or more lacquer

layers (9), or print (10) and lacquer layers (9), or print layers (10) (page 1, lines 30 to 32, and Figures 1 and 2).

There is also (b) a metal foil (1) (page 1, line 33). The first plastic film (5) is (i) in direct contact with the metal foil (1) or (ii) in direct contact with a layer of a bonding agent that is in direct contact with the metal foil (1) or (iii) in direct contact with a layer of a laminate adhesive (7) that is in direct contact with the metal foil (1) (page 1, lines 30 to 33, page 5, lines 15 to 19, and Figures 1 and 2).

There is further (c) a second functional layer (2) consisting of a second plastic film selected from the group consisting of (i) a plastic consisting of coextruded polyamide layer/polypropylene layer where the polyamide layer (3) is in direct contact with the polypropylene layer (4), and (ii) a plastic consisting of coextruded polyamide layer/polypropylene layer with at least one suitable or conventional plastic system additive in either or both of the polyamide layer (3) and the polypropylene layer (4) and where the polyamide layer (3) is in direct contact with the polypropylene layer (4) (Figures 1 and 2, and page 5, lines 15 to 19). The polyamide layer (3) lies between the foil (1) and the polypropylene layer (4) (Figures 1 and 2). The polyamide layer (3) is (1) in direct contact with the metal foil (1) or (2) in direct contact with a layer of a bonding agent that is in direct contact with the metal foil (1) or (3) in direct contact with a layer of a laminate adhesive (8) that is in direct contact with the metal foil (1) (page 5, lines 15 to 19). The coextruded polyamide layer/polypropylene layer (2) has a bond of sufficient to prevent delamination thereof during sterilization (page 8, lines 23 to 25).

The composite film of the invention has a simple structure, withstands the sterilization conditions, and can be easily processed into pouches (page 1, lines 24 and 25). The layers composite film does not delaminate under the conditions of sterilization (of the pouches, made from the composite film, containing foodstuffs, pharmaceutical products, etc.) (page 8, lines 11, 12 and 18 to 25, and page 1, lines 8 and 9). The composite films do not loose strength when subjected to sterilization conditions (page 8, lines 23 to 24). The metal foil (1) constitutes a barrier layer that is impermeable to water vapor and gases (page 1, lines 3 and 4).

## (6) ISSUES

The issues presented for consideration on appeal are:

- (I) Whether Claims 30, 34 and 38 are unpatentable under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,591,520 (Migliorini et al.).
- (II) Whether Claims 30, 34 and 38 to 45 are unpatentable under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,589,275 (Breitler et al.).
- (III) Whether Claims 30, 34 and 38 to 45 are unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 5,591,520 (Migliorini et al.) in view of U.S. Patent No. 5,589,275 (Breitler et al.).
- (IV) Whether Claims 30 to 38 and 43 to 47 are unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 4,407,689 (Ohtsuki et al.).
- (V) Whether Claims 39 to 42 are unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 4,407,689 (Ohtsuki et al.) in view of U.S. Patent No. 5,589,275 (Breitler et al.).
- (VI) Whether Claim 48 is unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 4,407,689 (Ohtsuki et al.) in view of U.S. Patent No. 6,090,471 (Abrams).

## (7) ARGUMENT

### FIRST ISSUE

The first issue for consideration by the Board in this appeal is whether or not Claims 30, 34 and 38 are unpatentable under 35 U.S.C. 102(b) as being anticipated by Migliorini et al. (U.S. Patent No. 5,591,520). Appellants contend that such claims are not anticipated by Migliorini.

If a prior art rejection reference does not teach each and every structure, limitation and other recitation in a claim, then such rejection reference does not anticipate such claim. Migliorini et al. does not anticipate appellants' Claims 30, 34 and 38 because, for example, Migliorini et al. does not disclose the plastic, of the second functional layer (c), that consists of coextrudate of a polyamide layer and a polypropylene layer, required by appellants' claims.

The Examiner has written that Migliorini et al. teaches a high barrier metallized film with excellent bond strengths comprising a coextruded multilayer film of a layer of polyamide (PA) adjacent and aggressively adhered to a layer of polypropylene (PP), and optionally a heat seal layer, such as, ethylene propylene (EP) or ethylene propylene butene (EPB), applied on the polypropylene layer opposite the polyamide layer, and a metal layer such as aluminum applied to the polyamide surface wherein the metallized film may be subsequently extrusion laminated on the metal surface with a low density polyethylene film (LDPE) *(meets the limitation "first functional layer containing a first plastic film that is a polyolefin or extrusion layer of a polyolefin or one or more lacquer layers")*, such that the structure of the resulting film is: LDPE/metal/PA/PP/EP or EPB (Abstract; Col. 1, lines 10 to 64; Col. 2, lines 39 to 42; Col. 3, line 58 to Col. 4, line 14; Example), wherein the Examiner takes the position that the polyamide/polypropylene film taught by Migliorini et al. would inherently meet the instant limitation with regards to delamination during sterilization given that the film is formed by coextrusion as instantly claimed and wherein the aluminum layer taught by Migliorini et al. reads on the term "aluminum foil" considering the

above claims have not limited the term to a particular aluminum layer thickness. Appellants traverse this statement as being an incorrect, inaccurate description of the disclosure of Migliorini et al.

One side of the metal foil in appellants' claimed composite has thereon a coextruded polyamide layer/polypropylene layer. The polyamide layer lies between the metal foil and the polypropylene layer, and is in direct contact with the metal foil (or a bond or adhesive layer that is in direct contact with the metal foil).

None of the generic or specific statements in Migliorini et al. anticipates any of appellants' Claims 30, 34 and 38.

Migliorini et al. states:

"An oriented film combination of (a) a base layer of polypropylene at least one surface of which comprises a maleic acid anhydride modified polypropylene; and (b) on at least one surface, a skin layer of an amorphous polyamide or a blend of an amorphous polyamide and a semicrystalline polyamide." [The Abstract]

There is no anticipation by this quotation from Migliorini et al. because, for example, this quotation does not mention a coextrudate.

Migliorini et al. states:

"In accordance with the present invention an oriented multi-layer film combination comprises:

(a) a base layer of polypropylene homopolymer or copolymer, at least one surface thereof comprising a maleic acid anhydride modified polypropylene homopolymer or copolymer; and

(b) on said at least one surface a skin layer of a member selected from the group consisting of (1) an amorphous polyamide and (2) a blend of an amorphous polyamide and a crystalline polyamide." [Column 1, lines 35 to 44]

There is no anticipation by this quotation from Migliorini et al. because, for example, this quotation does not mention a coextrudate.

Migliorini et al. states:

"While the polyamide of the present invention can be applied directly to the surface of the polypropylene or the polypropylene copolymer, it is preferred that the surface be modified by a particular functionalized material. This can be mixed into or applied on top of the polypropylene substrate, then the polyamide will aggressively adhere to this so-modified material. If a maleic anhydride polypropylene homopolymer or copolymer becomes a part of the substrate surface either by being interblended therewith or by being extruded thereon as a surface skin layer, this then becomes an ideal surface for receiving the polyamide layer of the present invention. This modified surface layer or skin layer itself cannot be separated from the propylene homopolymer or copolymer substrate. By a 'maleic anhydride modified polypropylene homopolymer or copolymer' is meant the product resulting from the reaction between



maleic anhydride and the thermal degradation product of polypropylene or polypropylene copolymer.” [Emphasis supplied] [Column 1, line 61, to column 2, line 11]

Extruding a layer onto the polypropylene layer is mentioned in the above quotation from Migliorini, however, the lack of coextrusion eliminates one of the embodiments. This quotation does not mention coextrusion for the other embodiment. There is no anticipation from Migliorini et al. because, for example, this quotation does not mention coextrusion or coextrudate.

Migliorini et al. states:

“The procedure for the use of a maleic anhydride modified polypropylene homopolymer or copolymer, when this material is interblended into the base layer is exemplified by the following technique....The alternative method of making available the maleic anhydride-modified polypropylene homopolymer or copolymer at the surface of the substrate is to coextrude the base polymer with a skin layer containing the maleic anhydride-modified polymer.” [Emphasis supplied] [Column 2, line 39, to column 2, line 56]

The interblending with the propylene is not coextruding to produce a coextrudate of a polyamide layer/polypropylene layer. Also, coextruding the maleic anhydride-modified polypropylene polymer and the polypropylene base is not the same as appellants’ claimed coextrudate of a polyamide layer/polypropylene layer. There is no anticipation by this quotation from Migliorini et al. because, for example, this quotation does not disclose appellants’ claimed coextrudate.

Migliorini et al. states:

“EXAMPLE”

“A three layer sheet was produced by coextrusion, employing the following materials:

A-layer dupont amorphous polyamide obtained from the condensation reaction of hexamethylenediamine and isophthalic anhydride;

B-layer 50% polypropylene homopolymer-50% Mitsui QF500 (maleic anhydride modified polypropylene); and

C-layer ethylene-propylene-butene-1 terpolymer containing 700 ppm erucamide antiblock.”

“The coextrudate was quenched at 150° F. on a cast roll, reheated on rolls to 270° F. and stretched 3.5 times its original length in the machine direction....The film was vacuum metallized with aluminum on the polyamide skin to an optical density 2.5 employing conventional vacuum metallization techniques....”

“The metallized film was subsequently extrusion laminated to a low density polyethylene film.” [Emphasis supplied] [Column 4, lines 15 to 44]

Appellants' claims require a coextrudate that only has two layers, i.e., a polyamide layer and a polypropylene layer (with the polyamide layer in direct contact with the metal foil, or with only a bonding agent or laminate adhesive layer therebetween). This example of Migliorini et al. coextrudes three layers, so there is no anticipation by the above quotation from Migliorini et al. The use of the term “consisting of” in the definition of the second functional layer (c) in

appellants' claims excludes coextrusion that includes a third layer, such as, the third layer of ethylene-propylene-butene-1 terpolymer of Migliorini et al.'s example.

Migliorini et al. states:

"1. A stretched multi-layer oxygen gas barrier film combination comprising in the following order:

- (a) a base layer of polypropylene homopolymer or copolymer at least one surface thereof comprising a maleic acid anhydride modified polypropylene homopolymer or copolymer;
- (b) a skin layer of an amorphous polyamide directly bonded on said at least one surface comprising a maleic acid anhydride modified polypropylene homopolymer or copolymer; and
- (c) a vacuum metallized layer on said polyamide skin layer." [Claim 1]

There is no anticipation by this quotation from Migliorini et al. because, for example, Claim 1 of Migliorini et al. does not mention a coextrudate.

Migliorini et al. states:

"2. The film combination of Claim 1 wherein said at least one surface (a) comprises:

- (1) said maleic anhydride modified polypropylene homopolymer or copolymer intermixed with said base layer polypropylene homopolymer or copolymer; or

(2) a separately applied skin layer comprising said maleic anhydride modified polypropylene homopolymer or copolymer on said base layer.”

[Claim 2]

There is no anticipation by this quotation from Migliorini et al. because, for example, Claim 2 of Migliorini et al. does not mention a coextrudate.

There is no anticipation of appellants' Claims 30, 34 or 38 by Migliorini et al. because Migliorini et al. does not teach, expressly or inherently, appellants' claimed invention.

There is no anticipatory disclosure of any kind in Migliorini et al. The burden of proof is upon the Examiner and the Examiner has not carried that burden of proof.

Nowhere does Migliorini et al. disclose a coextrudate consisting of a polyamide layer and a polypropylene layer. Every coextrudate in Migliorini et al. is different. The burden of proof is still on the Examiner.

The Examiner's attempted use of inherency to meet the claimed invention fails. Migliorini et al. does not meet all of the structure and other limitations of appellants' claims.

The Examiner has written: that appellants argue that the amended claims now overcome the Migliorini rejection because they recite that the second functional layer (c) is limited to a coextruded film of polyamide/polypropylene extrudate only given the “consisting of” language with respect to the second functional layer; that, however, the Examiner notes that the claim as a whole does not exclude additional layers nor does it exclude a layer in between the

metal foil and the polyamide/propylene film particularly given that the claim recites “sterilizable composite film containing a barrier layer...comprising a metal foil” and only requires that the metal foil be in direct contact to the first plastic film not the second functional layer; and that, hence, the Examiner maintains her position with regards to the rejections over Migliorini et al. Independent Claim 30, on its face, shows that the Examiner’s position is clearly in error. Nowhere does Migliorini et al. disclose a plastic consisting of a coextrudate of a polyamide layer and a polypropylene layer, therefore Migliorini et al. cannot anticipate independent Claim 30 (or any other of appellants’ claims). Independent Claim 30 also requires that the polyamide layer of appellants’ coextrudate be in direct contact with the metal foil (or through a bonding agent layer or a laminate adhesive layer).

The Examiner has written that with regards to coextrusion, it is noted that the reference must be taken as a whole and as such does in fact teach that the film of the invention may be produced by coextrusion particularly as described in the example. Appellants disagree with this statement because it does not comport with the factual disclosure of Migliorini et al. and the requirements of Section 102. Appellants have shown above in detail that Migliorini et al. does not disclose anywhere a plastic consisting of a coextrudate of a polyamide layer and a polypropylene layer.

The Examiner has written: that appellants’ arguments regarding the term “consisting of” have been considered however it is noted that the instant claims recite: “A sterilizable composite film...**comprising**...having a layer structure

containing one on top of the other...c) a second functional layer that is a second plastic film **comprising** a film consisting of" (emphasis added); and that, hence, contrary to the applicants' arguments, the film of the instant invention may include other films and/or layers in addition to the polyamide/polypropylene extrudate in the second functional layer. Appellants point out that the language of Claim 30 as appealed eliminates the Examiner's position.

The examiner has the burden of proof and the Examiner has not carried her burden of proof. The Examiner has not factually established in the record a prima facie showing of anticipation of appellants' claimed invention.

Appellants request that the Board reverse this Section 102(b) rejection of Claims 30, 34 and 38.

Appellants note that Claims 30, 34 and 38 were not rejected under 35 U.S.C. 103(a) over Migliorini et al. by itself. This rejection should be withdrawn.

### SECOND ISSUE

The second issue for consideration in this appeal is whether or not Claims 30, 34 and 38 to 45 are unpatentable under 35 U.S.C. 102(b) as being anticipated by Breitler et al. (U.S. Patent No. 5,589,275). Appellants contend that such claims are not anticipated by Breitler et al.

If a prior art reference does not disclose each and every structure, limitation and other recitation in a claim, then such rejection reference does not anticipate such claims. Breitler et al. does not anticipate any of appellants' Claims 30, 34, and 38 to 45. Breitler et al. discloses a polyamide layer on each side of a metal foil. Breitler et al. does not disclose any member of appellants'

first function layer (a) being between either of its polyamide layers and its metal layer, therefore Breitler et al. does not teach appellants' composite film.

Appellants' invention involves a sterilizable composite film containing a barrier layer that is impermeable to water vapor and gases comprising a metal foil, and on both sides of the barrier layer, at least one function layer. Appellants' sterilizable composite film has a simple structure, withstands the sterilization conditions without delamination, and can be easily processed into pouches. Appellants' composite film has a layer structure containing one on top of the other.

(a) a first functional layer containing a first plastic film that is a polyolefin or an extrusion layer of a polyolefin or one or more lacquer layers, or print and lacquer layers, or print layers;

(b) a metal foil, the first plastic film is (i) in direct contact with the metal foil, or (ii) in direct contact with a layer of a bonding agent that is in direct contact with the metal foil, or (iii) in direct contact with a layer of a laminate adhesive that is in direct contact with the metal foil; and

(c) a second functional layer that is a second plastic film comprising a film of (i) a plastic consisting of coextruded polyamide layer/polypropylene layer where the polyamide layer is in direct contact with the polypropylene layer, and (ii) optionally at least one suitable or conventional plastic system additive in plastic (i), the polyamide lies between the metal foil and the polypropylene layer, the coextruded polyamide layer/polypropylene has a bond sufficient to prevent delamination thereof during suitable.

Breitler et al. does not teach or suggest appellants' claimed composite. Breitler et al. discloses a polyamide layer on each side of the metal foil. Breitler et al. does not disclose any member of appellants' first functional layer between either of its polyamide layers and its metal layer, therefore Breitler et al. does not teach or suggest appellants' composite film.

The primary dispute between appellants and the Examiner is whether or not the Examiner has incorrectly asserted what Breitler et al. discloses. Appellants assert and argue below that the Examiner's position is in error both in fact and law.

The Examiner has written: that Breitler et al. teaches a composite material containing a metal layer, on both sides of that is a plastic layer wherein the metal layer is a metal foil, preferable aluminum or aluminum alloy with an aluminum purity of most preferable 99.5 percent or higher, including AA8014, AA8079, or AA8101, having a thickness of 8 to 120  $\mu\text{m}$ ; and that wherein the plastic layer(s) is a polyamide-based thermoplastic containing polyamide with a thickness of 20 to 50  $\mu\text{m}$  (Abstract; col. 1, lines 19 and 20; and col. 3, lines 1 to 22 and lines 66 and 67). Appellants traverse this statement as being an incorrect statement of the disclosure of Breitler et al. As per the disclosure of Breitler et al., the only layers that can be between the polyamide layers and the metal layer are thin adhesive layers and/or thin primer or bonding agent layers and/or barrier layers.

Breitler et al. works with a basic composite material of a metal layer with a polyamide layer on both sides. When Breitler et al. permits any layer (i.e.,



adhesive or bonding agent primer) between one of the polyamide layers and the metal layer, Breitler et al. specifically indicates such. All of the layers mentioned by Breitler et al. are located outside of the polyamide layers (i.e., not between the polyamide layers and the metal layer). Breitler et al. does not disclose any polyolefin layer between either of its polyamide layers and its metal layer.

Breitler et al. uses polypropylene in sealing layers located on the outside of the polyamide layers. Sealing layers are not used by Breitler et al. inside of the polyamide layers.

The Examiner has written that Breitler et al. teaches that the plastic layer on both sides of the metal layer include composites of two or more films or layers wherein the polyamide-based thermoplastic layers may additionally and independent of each other be provided with an outer lying sealable layer and/or barrier layer of thermoplastics, such as, a polypropylene sealable layer, wherein the sealable layers are sealable films deposited via adhesives, applied by lamination or lamination coating wherein the thickness of the sealable films may be 6 to 100  $\mu\text{m}$  thick and furthermore, one or more layers, e.g., 1 to 10  $\mu\text{m}$  thick, of a sealing layer coating may be deposited on the plastic composite (col. 4, lines 1 to 38). Appellants traverse this statement as it does not indicate that there is no disclosure in Breitler et al. that places any sealable layer between the polyamide layers and the metal layer.

The sealable layers of Breitler et al. only lie outside of the polyamide layers.

The Examiner has written that Breitler et al. further teaches that a single or double-sided sealable composite may be obtained by single or double-sided coextrusion of the plastic layers, wherein in that connection, it is useful for the plastic layers to contain or comprise a polyamide-based thermoplastic and at least one polyamide layer to feature a sealing layer on at least one side, i.e., each layer of polyamide thermoplastic may be covered with a sealable layer, such as polypropylene, on one side or both sides, independent of the other layers (Col. 4, lines 36 to 45). Appellants traverse this rejection as being clearly incorrect.

The issue is whether Breitler et al., in column 4, lines 9 to 44, particularly lines 36 to 44, discloses:

- (1) an outerlying sealable (polypropylene) layer on either or both sides of the composite material; or
- (2) a sealable (polypropylene) layer on either or both sides of each polyamide layer (of the composite).

Analysis of the disclosure of Breitler et al. clearly shows that column 4 thereof deals with an outerlying sealable layer on either or both sides of the composite material.

The Examiner's position that column 4 of Breitler et al. deals with the polyamide layers (instead of the composite matter) is in error.

The Examiner has incorrectly taken portions of column 4 of Breitler et al. out of context and has incorrectly analyzed such disclosure. The context of Breitler et al. is that Breitler et al. is speaking of the composite material.

Throughout all of Breitler et al. the context is the composite material of their invention. When Breitler et al. speaks of "on one or both sides", Breitler et al. is only speaking of the composite material.

The C.A.F.C. in Bausch & Lomb, Inc. v. Barnes-Hind/Hyrdocurve, Inc. 230 U.S.P.Q. 416, 119-420, (1986), stated:

"The court also engaged in improper hindsight analysis to conclude the '814 patent would have been obvious..."

Barnes-Hind selected a single line out of the Caddell specification to support the above assertion: "...This statement, however, was improperly taken out of context. As the former Court of Customs and Patent Appeals held:

It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.

*In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965); see also *In re Mercer*, 515 F.2d 1161, 1165-66, 185 USPQ 774,778 (CCPA 1975)

"A full appreciation of Caddell's statement requires consideration of the immediately following sentences in the same paragraph and the paragraph after that. Viewed in that context, it is apparent that.....A complete reading demonstrates quite clearly that ....The district court

improperly viewed an isolated line in Caddell in light of the teaching of the '814 patent to hold for obviousness. This is improper hindsight analysis."

"The district court also failed to consider the Caddell reference in its entirety....." [Emphasis supplied]

The C.A.F.C. in In re Evanega et al., 4 USPQ 2d 1249, 1251, (1987), stated:

"When read together and in context, \*\*\*\*. \*\*\* Instead, the entirety of Schuurs suggests that .... See *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568, 1 USPQ 2d 1593, 1597, *cert. denied*, 107 S.Ct. 2187 (1987) (in determining obviousness, a prior patent must be considered in its entirety). Thus, we conclude that the board erred in determining that Schuurs established a prima facie case."

The context of all the disclosure of Breitler et al. is the composite material of their invention. Breitler et al., for example, states:

The invention relates to a metal-plastic composite material..." [Emphasis supplied][Col. 1, lines 6 and 7]

The object of the present invention is to provide a metal-plastic composite material..." [Emphasis supplied] [Col. 2, lines 25 and 26]

The objective is achieved by way of the invention in the form of a ....composite material..." [Emphasis supplied][Col. 2, lines 29 to 31]

"The composite material...." [Abstract, first line]

The portion of the column 4 of Breitler et al. relied upon by the Patent Office clearly deals with sealable layers located on the outer sides of the composite material. The context is entirely in terms of the composite material.

There is no teaching of a sealing layer between a polyamide layer and the metal layer in the text in lines 3 to 45 of column 4 of Breitler et al., which reads as follows:

“The plastic layers on both sides of the metal layer of the composite according to the invention...”

“The plastic layers on both sides of the metal layer, in particular the polyamide-based thermoplastics may additionally, and independent of each other, be provided with an outer lying sealable layer and/or a barrier layer of thermoplastics.”

“The composite according to the invention may also feature a sealing layer or sealable layer on one or both sides.”

“The composite material according to the present invention forms a composite containing plastic film that, in order to extend the range of properties, may be coated with one or more layers of material such as e.g., plastic films.”

“Sealable layers are e.g. sealable films deposited e.g. via adhesives that contain or are free of solvents, or water-based adhesive systems, applied by extrusion lamination or lamination coating. Sealable films may contain or consist of e.g. LLDPE, LDPE, MDPE, HDPE, polypropylene, polyethylene-terephthalate or polyolefin-based isomers. Ionomers or ionomer-containing polymers with typical properties of ionomers may be thermoplastic copolymers with typical properties of ionomers may be thermoplastic copolymers of olefin with carboxyl-

containing monomers, a part of which are present as free carboxyl groups and the remainder bonded to metal cations so that some transverse cross-linking is achieved. Polyethylene based ionomers are known under the trade name Surlyn. Sealable films may be 6 to 100  $\mu\text{m}$ . Furthermore, one or more layers e.g. 1 to 10  $\mu\text{m}$  thick, of a sealing coating or hot-sealing coating, for example, may be deposited on the plastic film composite.”

“A single or double-sided sealable composite is obtained by single or double-sided coextrusion of the plastic layers with e.g. a polypropylene/polyethylene copolymer.”

“In that connection it is useful for the plastic layers to contain or comprise of a polyamide-based thermoplastic and at least one a polyamide-based thermoplastic to feature a sealing layer on at least one side i.e. each layer of polyamide-based thermoplastic may be covered with a sealable layer on one or both sides, independent of the other layers.” [Emphasis supplied]

All references to sealing layers in such text are exclusively to sealing layers, located on the outer surfaces of the composite material, i.e., on the outer surface of the plastic layers of the composite material.

Lines 36 to 45 of column 4 of Breitler et al. recites:...with a sealable layer on one or both sides, ....” This statement refers to the sides of the composite material (and not to the polyamide layers) as shown by the language of lines 36 and 39 and the overall context of usage in Breitler et al. This is further confirmed by usage of such language elsewhere in Breitler et al.

Breitler et al. in column 5, line 49, to column 6, line 14, states:

"Typical arrangements of the layers in composites according to the invention include for example:

- a) a middle layer of aluminum of thickness e.g. 8 to 80µm, preferably 40 to 70 µm and in particular 45 to 60 µm, and on each side of the aluminum layer
- b) and b') a layer of adhesive coating and/or bonding agent having a thickness of 1.5 to 9 µm, or 1 to 10 g/m<sup>2</sup>
- c) and c') a layer of biaxially stretched polyamide of thickness e.g. 20 to 50 µm, preferably 20 to 40 µm and in particular 20 to 30 µm

and if desired

- d) and d') a barrier layer on one or both sides

and if desired

- e) and/or e') a layer of a sealing coating or sealing layer on one or both sides in a quantity of 2 to 6 g/m<sup>2</sup>, or of thickness up to 10 µm."

\*\*\*\*

"Useful composite materials contain .... Analogously, layers b), c), d) and e) are provided on one side of layer a) and layers b'), c'), d') and e') on the other side of layer a)." [Emphasis supplied]

Page 2100-120 of the M.P.E.P. states that a "prior art reference must be considered in its entirety i.e., as a whole,....." It is error for the Patent Office to

take a sentence(s) out of context, particularly where such sentence(s), as here, refer to other sentences/paragraphs that clearly establish the context.

Lines 9 to 13 of column 4 of Breitler et al. states:

"The plastic layers on both sides of the metal layer, in particular the polyamide-based thermoplastics may additionally, and independent of each other, be provided with an outer lying sealable layer and/or a barrier layer of thermoplastics." [Emphasis supplied]

Such text is not discussing the plastic layers by themselves but instead only as components in the structure of the basic composite material. The use of the phrase "outer lying sealable layer" refers only to the outside surfaces of the basic composite material (i.e., the outside surface of each of the plastic layers). The words "outer lying" refer only to the side of each of the plastic layers away from the metal foil. Furthermore, the above quotation also shows that the sealable layers were only located on the outside of the composite material on the outer side of the polyamide layers.

The phrase "on outer lying sealable layer and/or barrier layer" restricts the sealable layer to the outside surface of the plastic layers in the composite material. The term "outer lying" does not modify the barrier layer.

When Breitler et al. meant that a substance or layer could be located between a plastic layer and the metal layer, the text clearly says or indicates so.

Column 4, line 46 to 61, of Breitler et al. states:

Beside the metal foil, at least one additional layer may be provided as a barrier layer....\*...Barrier layers are situated for example between the



metal layer and the polyamide layer or layers; the barrier layers are preferably situated on the polyamide layer on the opposite side facing the metal layer. Foreseen in particular is a barrier layer on one side of the metal layer only, lying on the polyamide layer."

The above quotation recites that the barrier layer layer can be between one of the plastic layers and the metal foil. The term "outer lying" does not modify "a barrier layer", but instead restricts the location of the "sealable layer" to the outside surface of the plastic layer away from the metal foil.

During the examination of Breitler et al., the Patent Office cited U.S. Patent No. 5,100,708 (Heyes et al.) against their underlying application. Heyes et al. disclosed a laminated metal sheet where the metal sheet had on one of its (major) surfaces a composite of an inner layer (A<sup>1</sup>) of thermoplastic polymer and an outer layer (B<sup>1</sup>) of thermoplastic polymer. Page 3 of the Office Action of March 5, 1996 in therein stated: "The thickness of the inner and outer layer of the thermoplastic polymer..." The Patent Office clearly was aware of that which was meant by "outer" or "outer laying" in the Breitler et al. application. Page 3 of the Amendment of October 13 1995 stated: "In Heyes et al., the wording "inner" means between the metal layer and the outer layer. Both the inner and outer layers are arranged on the same side of the metal sheet." The prosecution/examination history of Breitler et al. clearly shows that the terms "outer" and "outer lying" do not mean between the metal foil and a polyamide layer.

There is no reason in the composite material of Breitler et al. to have an inner sealable layer (it already typically has an adhesive coating and/or bonding agent between the metal foil and the polyamide layer). The sealing layer of Breitler et al. is used only as the outermost layer for the purpose of safely fixing or sealing the lid to the base part of a packaging. The Examiner did not correctly analyze column 4 of Breitler et al. in view of such reference as a whole.

The Examiner has written that Breitler et al. teaches that to join the aluminum foil or to bond the plastic films or individual layers to each other, an adhesive coating and/or bonding primer are usually employed wherein a suitable adhesive is a maleic-anhydride modified polypropylene, and suitable bonding agents are epoxy or urethanes, wherein the bonding agent or primer may be, for example, applied in amounts of 0.1 to 10 g/m<sup>2</sup>, usefully 0.8 to 6 g/m<sup>2</sup> or the adhesive layer has a thickness of 1 to 12 µm or applied in an amount of 0.1 to 14 g/m<sup>2</sup> (col. 5, lines 3 to 47). This disclosure of Breitler et al. does not anticipate appellants' overall claimed invention.

The Examiner has written that Breitler et al. further teaches that the composite material may also feature a sealing layer such as PET on one or both sides of the composite independent of the other layers, with a thickness of 6 to 100 µm (Col. 4, lines 20 to 35). It is not a further teaching, it is the only teaching of Breitler et al. regarding the sealing layers.

The Examiner has written the Breitler et al. teaches a number of layer arrangements including the layer structure as instantly claimed wherein the plastic films may be formed by warm coating or coextrusion and may be

subjected to stretch-drawing, to produce a composite film useful in manufacturing packaging and parts of packaging such as packaging containers, base parts, blister packs, for storing or packaging foodstuffs or pharmaceutical products (col. 5, line 48, to col. 6, line 23; and col. 6, line 65, to col. 7, line 33). Appellants traverse this statement. As shown above, Breitler et al., does not teach the structural sequence of appellants' layers. Breitler et al. does not anticipate appellants' claimed invention.

The Examiner has written that, with regards to the limitation "lacquer", the Examiner takes the position that the synthetic coating layers taught by Breitler et al. reads on the term "lacquer" layer. Even is so, Breitler et al. does not teach appellants' claimed invention.

The Examiner has the burden of proof and the Examiner has not carried her burden of proof. The Examiner has not factually established in the record a showing of anticipation of appellants' claimed invention.

Appellants request that the Board reverse this Section 102(b) rejection of Claims 30, 34 and 38 to 45.

Appellants note that Claims 30, 34 and 38 to 45 have not been rejected under 35 U.S.C. 103(a).

### THIRD ISSUE

The third issue for consideration by the Board in this appeal is whether or not Claims 30, 34 and 38 to 45 are unpatentable under 35 U.S.C. 103(a) over Migliorini et al. in view of Breitler et al. Appellants content that such claims are not obvious over Migliorini et al. in view of Breitler.

Appellants have shown above that Migliorini et al. does not teach or suggest a plastic that consists of a coextrudate of a polyamine layer and a polypropylene layer or that the polyamide layer is between the polypropylene layer and the metal layer. Appellants have further shown above that Breitler et al. does not teach or suggest appellants' first function layer (a) between a polyamide layer and the metal layer (b). Breitler et al. does not cure the defects of Migliorini et al. in the search for appellants' claimed invention.

The Examiner has written that Migliorini et al. teaches a high barrier metallized film with excellent bond strengths comprising a coextruded multilayer film of a layer of polyamide (PA) adjacent and aggressively adhered to a layer of polypropylene (PP), and optionally a heat sealed layer, such as, ethylene propylene (EP) or ethylene propylene butane (EPB), applied on the polypropylene layer opposite the polyamide layer, and a metal layer such as aluminum applied to the polyamide surface wherein the metallized film may be subsequently extrusion laminated on the metal surface with a low density polyethylene film (LDPE) (meets the limitation "first functional layer containing a first plastic film that is a polyolefin or extrusion layer of a polyolefin or one or more lacquer layers"), such that the structure of the resulting film is: LDPE/metal/PA/PP/EP or EPB (Abstract; Col. 1, lines 10 to 64; Col. 2, lines 39 to 42; Col. 3, line 58 to Col. 4, line 14; Example), wherein the Examiner takes the position that the polyamide/polypropylene film taught by Migliorini et al. would inherently meet the instant limitation with regards to delamination during sterilization given that the film is formed by coextrusion as instantly claimed and

wherein the aluminum layer taught by Migliorini et al. reads on the term “aluminum foil” considering the above claims have not limited the term to a particular aluminum layer thickness. Appellants traverse this statement as being incorrect, inaccurate description of the disclosure of Migliorini et al. The Examiner’s description of the disclosure of Migliorini et al. is incorrect, and is not supported by even the portions of Migliorini et al. cited by the Examiner, as shown below by appellants. Migliorini et al. does not disclose any coextrudate consisting of a polyamide layer and a polypropylene layer. The addition of Breitler et al. to Migliorini et al. does not result in appellants’ claimed invention.

One side of the metal foil in appellants claimed composite has thereon a coextruded polyamide layer/polypropylene layer. The polyamide layer lies between the metal foil and the polypropylene layer, and is in direct contact with the metal foil (or a bond or adhesive layer that is in direct contact with the metal foil).

None of the generic or specific statements in Migliorini et al. teaches or suggests any of appellants’ Claims 30, 34 and 38. Breitler et al. does not cure the defects of Migliorini et al. in the search of appellants’ claimed invention.

Migliorini et al. does not teach or suggest, expressly or inherently, appellants’ claimed invention of Claims 30, 34 and 38 to 45.

The burden of proof is upon the Examiner and the Examiner has not carried that burden of proof.

Nowhere does Migliorini et al. disclose a coextrudate consisting of a polyamide layer and a polypropylene layer. Every coextrudate in Migliorini et al. is different. The burden of proof is still on the Examiner.

The Examiner's attempted use of inherency to meet the claimed invention fails. Migliorini et al. does not teach or suggest all of the structure, limitations and other recitations of appellants' claims. Breitler et al. does not cure the defect of Migliorini et al. in the quest for appellants claimed invention.

The Examiner has written: that appellants argue that the amended claims now overcome the Migliorini et al. rejection because they recite that the second functional layer (c) is limited to a coextruded film of polyamide/polypropylene extrudate only giving the "consisting of" language with respect to the second functional layer; that, however, the Examiner notes that the claim as a whole does not exclude additional layers nor does it exclude a layer in between the metal foil and the polyamide/propylene film particularly given that the claim recites "sterilizable composite film containing a barrier layer...comprising a metal foil" and only requires that the metal foil be in direct contact to the first plastic film not the second functional layer; and that, hence, the Examiner maintains her position with regards to the rejections over Migliorini et al. Independent Claim 30, on its face, shows that the Examiner's position is clearly in error. Nowhere does Migliorini et al. disclose a plastic consisting of a coextrudate of a polyamide layer and a polypropylene layer, therefore Migliorini et al. cannot teach or suggest independent Claim 30 (or any other of appellants' claims). Breitler et al. does not cure the defects of Migliorini et al. Independent Claim 30 also requires

that the polyamide layer of appellants' coextrudate be in direct contact with the metal foil (or through a bonding agent layer or a laminate adhesive layer).

Note that, in regard to all of the Section 103(a) rejections, the Examiner did not follow the requirements of the Graham decision so all of the Section 103(a) rejections are defective. The Examiner, accordingly, has not made any prima facie showings of obviousness in the record.

The Examiner has written that Migliorini et al. teaches that a metallized layer is a functional equivalent to a metal foil layer in terms of providing barrier properties in a multiplayer composite film wherein the metal layer thickness affects the barrier properties of the film, hence based on the teachings of Migliorini et al., one having ordinary skill in the art at the time of the invention taught by Migliorini et al. based on the desired barrier properties for a particular end use of the packaging film. Appellants traverse this statement. Nowhere does Migliorini et al. disclose that a metallized layer is the functional equivalent of a metal foil.

Breitler et al. does not cure the defects of Migliorini et al. in the search for appellants' claimed composite. Breitler et al. discloses a polyamide layer on each side of the metal foil. Breitler et al. does not disclose any member of appellants' first functional layer being between either of its polyamide layers and its metal layer. As per the disclosure of Breitler et al., the only layers that can be between the polyamide layers and the metal layer are thin adhesive layers and/or thin primer or bonding agent layers and/or barrier layers.

Breitler et al. works with a basic composite material of a metal layer with a polyamide layer on both sides. When Breitler et al. permits any layer (i.e., adhesive or bonding agent primer) between one of the polyamide layers and the metal layer, Breitler et al. specifically indicates such. All of the layers mentioned by Breitler et al. are located outside of the polyamide layers (i.e., not between the polyamide layers and the metal layers). Breitler et al. does not disclose any polyolefin layer between either of its polyamide layers and its metal layer.

Breitler et al. uses polypropylene in sealing layers located on the outside of the polyamide layers. Sealing layers are not used by Breitler et al. inside of the polyamide layers.

All of the teachings in the rejection references must be considered under Section 103(a). Breitler et al. teaches that there is a polyamide layer next to each side of the metal layer. Insertion of Breitler et al. into Migliorini et al. must include such teachings of Breitler et al. with the result of a composition film that has the lack of appellants' first functional layer (a) being in direct contact with the metal (b). The Examiner has not shown in the record why this requirement of Breitler et al. can be ignored in the search for appellants' claimed invention. See *In re Wesslau*, 147 USPQ 391, 392 (C.C.P.A.).

There is no disclosure in Breitler et al. that places any sealable layer between the polyamide layers and the metal layer. The sealable layers of Breitler et al. only lie outside of the polyamide layers.

Throughout all of Breitler et al. the context is the composite material of their invention. When Breitler et al. speaks of "on one or both sides", Breitler et



al. is only speaking of the composite material. The context of all the disclosure of Breitler et al. is the composite material of their invention.

The Examiner speaks of "a broad interpretation" of Breitler et al. Section 103(a) requires facts, not speculation. So-called broad interpretation is merely speculation, that is clearly erroneous. The facts of the disclosure of Breitler et al. clearly establish that the Examiner's position is incorrect.

The Examiner's position is in error. The Examiner has not factually established in the record a prima facie showing of obviousness of appellants' claimed invention.

Appellants have shown above that Migliorini et al. and the Examiner's description of the teachings of Migliorini et al. do not teach or suggest appellants' claimed invention. Breitler et al. does not cure the defects of Migliorini et al. in the search for appellants' invention.

The Examiner's attempt to show motivation fails.

The Examiner has written that, further, one having ordinary skill in the art would have been motivated to utilize any conventional metal foil or aluminum foil layer utilized in the art wherein Breitler et al. teaches the use of an aluminum foil layer having the instantly claimed properties in a composite barrier packaging film and, hence, "one skilled in the art" would have been motivated to utilize the preferred metal foil taught by Breitler et al. in the composite barrier film taught by Migliorini et al. Appellants traverse this statement. The standard is one ordinarily skilled in the art. The Examiner has not factually shown in the record any motivation for combining Breitler et al. with Migliorini et al.

If Breitler et al. is combined with Migliorini et al., then both sides of the metal foil would have direct polyamide layers – that is not the appellants' claimed invention. All of the teachings of the prior art of record has to be considered under Section 103(a). There is no reason of record why the Examiner can pick part(s) of Breitler et al. and ignore other parts of Breitler et al. that destroy the Examiner's rejection.

The Examiner has written that, with regards to Migliorini et al. in view of Breitler et al., in response to appellants' argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art; that, in this case, Migliorini et al. teaches a metallized composite film comprising a generic aluminum layer but does not teach that the aluminum layer is an aluminum foil having the instantly claimed features of purity; that, however, it is noted that aluminum having the claimed purity is preferable in the art in terms of metal/plastic packaging materials wherein a foil of aluminum or aluminum alloys as instantly claimed is preferred as taught by Breitler et al.; that, hence, the question is whether one skilled in the art would have been motivated to utilize an aluminum foil layer taught by Breitler et al. in place of the aluminum metallized layer in the invention taught by Migliorini et al.; that the Examiner maintains her position that it would have been obvious given that a metallized layer and a metal foil are known

functional equivalents in terms of a gas barrier material in a packaging film wherein the barrier properties are a function of the thickness of the metal layer; and that, therefore, it would have been obvious to one skilled in the art to utilize any species of aluminum barrier layer in the invention taught by Migliorini et al. wherein Breitler et al. teaches that the instantly claimed species is an obvious species utilized in the packaging art. Appellants traverse this statement. The Examiner has clearly used forbidden hindsight. The two rejection references in combination would result in an entity that is different from appellants' claimed invention.

Appellants request that the Board reverse this Section 103(a) rejection of Claims 30, 34 and 38 to 45.

#### FOURTH ISSUE

The fourth issue for consideration by the Board in this appeal is whether or not Claims 30 to 38 and 43 to 47 are unpatentable under 35 U.S.C. 103(a) over Ohtsuki et al. (U.S. Patent No. 4,407,689). Appellants contend that such claims are not obvious over Ohtsuki et al.

The Examiner has written that Ohtsuki et al. teaches a laminated member comprising a metal foil laminated to a thermoplastic film via a polyolefin-based adhesive wherein the metal foil is made of aluminum with a thickness of about 5 to 1,000  $\mu\text{m}$ , may be subjected to chemical treatment (primer) on the surface of the metal foil, and may be backed with a heat-resistant film such as a polyamide or polyester film (*also reads on term "lacquer layer"*) since the metal foil is generally low in mechanical strength, wherein a print layer may be formed

between the heat-resistant layer and the aluminum foil (Abstract; Col. 2, line 25, to Col. 4). Appellants traverse this statement. For example, this statement leaves out some of the generic nature of the disclosure of Ohtsuki et al. The metal foil can be backed with a thermoplastic resin (1). The thermoplastic resin (4) can be printed and/or painted.

Appellants' claimed invention addresses a specific problem and solves that specific problem. Ohtsuki et al. does not recognize such problem and does not teach or suggest a solution to such problem.

A major focus of Ohtsuki et al. is to provide a specific adhesive that prevents separation of a thermoplastic resin layer from a metal foil (with or without a thermoplastic resin backing) as a result of retort sterilization. This is not the same as preventing the separation of two thermoplastic resin layers (the two layer composite being adhered to the metal foil).

Examples 1 and 2 of Ohtsuki et al. used a special modified polyolefin adhesive to bond together a polypropylene film and an aluminum foil (backed with a polyester film). Example 2 (lines 19 to 29) of Ohtsuki et al. states:

"The laminated members obtained in Examples 1 and 2 were formed into a bag. These bags were charged with Chinese mixed flavoring and sealed. They were subjected to retort sterilization at 120°C. for 30 minutes, and then the adhesion strength between the aluminum foil and the polypropylene film was measured in each bag. The adhesion strength of each of the bags was within the range that can be practically used. However, the adhesion strength of the laminated member of

Example 1 was 1,050 g/15 mm, whereas that if the laminated member of Example 2 was lower by about 20%.” [Emphasis supplied]

Example 3 states that, with a tin plate and a polypropylene film, nearly the same results as in Example 1 were obtained. Example 4, with an aluminum foil and a polyethylene film, states:

“The adhesion strength between the polyethylene film and the aluminum foil was 850 kb/15 mm.” [Emphasis supplied]

Appellants’ claimed invention requires a second functional layer that is a film of a plastic consisting of a coextrudate of a polyamide layer and a polypropylene layer, with both of such layer in direct contact with each other. (The polyamide layer is closest to the metal foil.) The problem that appellants’ claimed invention addresses and solves is the delamination due to sterilization conditions. See page 1, lines 19 to 25, and page 8, lines 23 to 25, of the specification.

Appellants’ claimed invention provides composite films that can be sterilized without suffering delamination of the individual layers. Ohtsuki et al. does not teach or suggest that, when it coextrudes two plastics, such coextrudate does not delaminate under sterilization conditions. Instead, Ohtsuki et al. only discloses that its special adhesive prevents delamination of a polyolefin layer (i.e., polypropylene or polyethylene) and a metal foil under retort sterilization conditions. Silence in a reference is no substitute for the facts required by Section 103(a).

Ohtsuki et al. generically speaks of a thermoplastic resin film (4). In addition to such generic disclosure, column 3, lines 20 to 26, of Ohtsuki et al. states:

"The thermoplastic resin films as used in this invention may be a single resin film produced from, for example, polyolefin, polyamide, polyester, polyvinyl chloride, polyvinylidene chloride, polybutadiene, polycarbonate, an ethylene-vinyl acetate copolymer, or polyvinyl alcohol, or a composite film produced therefrom by coextrusion, for example."

[Emphasis supplied]

Such examples of useful thermoplastics results in a very large number of possible coextrudates with no guidance (or motivation) to specifically use a coextrudate of polyamide and polypropylene, or that such specific coextrudate eliminates the problem of delamination under retort specification conditions. To assert otherwise is mere forbidden hindsight. In fact, Ohtsuki et al. tends to direct away from a coextrudate of polyamide and polypropylene by stating that it is preferred to use a polyolefin or a polyamide (it does not say together) when the thermoplastic resin film is to be in contact with food or drink (see column 3, lines 27 to 32).

Column 3, lines 33 to 38, of Ohtsuki et al. states that when two thermoplastic resin film layers are used, they can be from either the same resin or different resins. This statement does not direct specifically to a coextrudate of polyamide and polypropylene or teach/suggest that such a specific coextrudate eliminates delamination thereof under sterilization conditions.

Appellants found an unexpected invention, with an unexpected result, that is unfathomable from the forest of the Ohtsuki et al. disclosure.

Column 3, line 65, to column 4, line 2, of Ohtsuki et al. discloses that it is preferable to use highly crystalline polyolefins when its laminated member is used for the production of a retort sterilization package. Thus, Ohtsuki et al. again directs away from appellants' use of a coextrudate of polyamide and polypropylene.

The Examiner has written that Ohtsuki et al. teaches that the thermoplastic film may be a single resin film, for example, polyolefin such as polyethylene or polypropylene, polyamide, polyester, polyvinyl chloride, polyvinylidene chloride, polybutadiene, polycarbonate, an ethylene-vinyl acetate, or polyvinyl alcohol or a composite film produced therefrom by coextrusion (Col. 3, lines 20 to 32). Appellants have shown above that appellants' claimed invention is unobvious over even this disclosure of Ohtsuki et al. Note that the Office Action has not made the express fact-findings required by the Graham decision.

The Examiner has written that Ohtsuki et al. further teaches that the laminated product may be used for the production of a retort sterilization package wherein when it is used as a material for packaging food to be sterilized in a retort, it is preferred to use high density polyethylene or polypropylene as the polyolefin (Col. 5, lines 22 to 27). Appellants traverse this statement as being an incorrect statement of the disclosure of Ohtsuki et al. As shown by the examples

thereof, Ohtsuki et al. is only concerned with delamination of the metal foil (1) and the thermoplastic resin film (4).

The Examiner has written that, hence, Ohtsuki et al. teaches a composite having the following structure: polyester/print layer/primer/aluminum foil/primer/polyolefin adhesive/thermoplastic film wherein the teachings of Ohtsuki et al. suggests that the thermoplastic film may be a coextruded film of two different polymers such as polypropylene and polyamide (Col. 3, lines 20 to 32; Col. 39 to 42) and, therefore, "one skilled in the art" at the time of the invention would have been motivated to utilize a coextruded film of any two polymers disclosed by Ohtsuki et al. including polypropylene and polyamide. Appellants traverse this statement. [Motivation for one skilled in the art is of no relevance under Section 103(a).] The number of possible combinations of two thermoplastics based on the subgeneric groups and specific resins listed in Ohtsuki et al. is very large. There is no motivation of record for one ordinarily skilled in the art to use a coextrudate of polyamide and polypropylene. There is no suggestion in Ohtsuki et al. that such a coextrudate will cure the problem (that Ohtsuki et al. does not mention) of delamination of separate layers, or even a coextrudate, of any of two thermoplastics, let alone polyamide and polypropylene.

The Examiner has written that, with regards to Claim 32, though Ohtsuki et al. teaches that the polyester backing film is present to provide improved mechanical strength, Ohtsuki et al. does not specifically teach that the polyester film is monoaxially or biaxially oriented or that the polyester is formed from PET



or PPT. Claim 30 has been amended to correct it to recite polyester. The Examiner has written that, however, it is well known and conventional in the art to orient a polymer film mono- or bi-axially to improve the mechanical strength of the film, hence, given that Ohtsuki et al. teaches that the polyester film is provided because the metal foil lacks mechanical strength, one having ordinary skill in the art at the time of the invention would have been motivated to improve the mechanical strength of the polyester film and resulting resin backed metal foil by orienting the polyester film as well known and conventional in the art.

Appellant's invention as a whole is unobvious over Ohtsuki et al. The Examiner has written that, further, one having ordinary skill in the art at the time of the invention would have been motivated to utilize any polyester film conventionally utilized in producing packaging composite materials wherein PET and PPT are obvious species of polyester film utilized in the art to provide mechanical strength to a composite film. Appellants' invention as a whole is not made obvious by the rejection reference.

The Examiner has not factually established in the record a prima facie showing of obviousness of appellants' claimed invention.

Appellants request that the Board reverse this Section 103 (a) rejection of Claims 30 to 38 and 43 to 47.

#### FIFTH ISSUE

The fifth issue for consideration by the Board in this appeal is whether or not Claims 39 to 42 are unpatentable under 35 U.S.C. 103(a) over Ohtsuki et al.

in view of Breitler et al. Appellants contend that such claims are not obvious over Ohtsuki et al. in view of Breitler et al.

The Office Action stated that the teachings of Ohtsuki et al. are discussed above. Ohtsuki et al. does not make appellants' invention obvious. Breitler et al. does not cure the defects of the primary reference in the search for appellants' invention.

Breitler et al. does not teach or suggest the layer structure of appellants' claimed invention, as appellants demonstrated above. The plastic films of Breitler et al. contain or comprise polyamide-based thermoplastics. Breitler et al. does not disclose appellants' claimed first functional layer between a polyamide layer and the metal foil (layer).

The Examiner has written that, though Ohtsuki et al. teaches that the metal foil may be an aluminum foil, Ohtsuki et al. does not specifically teach that the aluminum foil has the properties as instantly claimed. The Examiner has further written that, however, one having ordinary skill in the art would have been motivated to utilize any conventional aluminum foil utilized in the art wherein Breitler et al. teaches the use of an aluminum foil layer having the instantly claimed properties in a composite barrier packaging film and, hence, "one skilled in the art" would have been motivated to utilize the preferred aluminum foil taught by Breitler et al. in the composite barrier film taught by Ohtsuki et al. Appellants traverse this statement. The combination of rejection references still does not result in the appellants' invention. There is not factually showing of the

necessary motivation to combine the two rejection reference in the search for appellants' claimed invention.

The Examiner has not factually established in the record a prima facie showing of obviousness of appellants' claimed invention.

Appellants request that the Board reverse this Section 103(a) rejection of Claims 39 to 42.

#### SIXTH ISSUE

The sixth issue for consideration by the Board in this appeal is whether or not Claim 48 is unpatentable under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al. in view of Abrams (U.S. Patent No. 6,090,471). Appellants contend that Claim 48 is not obvious over Ohtsuki et al. in view of Abrams.

The disclosure of Ohtsuki et al. is discussed above. Abrams does not cure the defects of Ohtsuki et al. in the quest for appellants' invention.

The Examiner has written that, though Ohtsuki et al. teaches that the aluminum foil layer may comprise a print layer and a polyester or polyamide overcoat or backing film, Ohtsuki et al. does not teach that the print layer is provided on the polyester backing film and then an overcoat layer is provided on the print layer. The Examiner has also written that, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any combination of print and polyester layers wherein Abrams teaches that a sterilizable packaging composite can comprise a print layer to provide desired product information for a particular packaging end use and that a protective overcoat or lacquer layer can be provided over the print layer to protect the print

layer during sterilization. Appellants' traverse this statement as being incorrect. Also, appellants' invention as a whole is unobvious.

The Examiner has written that, however, it is well known in the art, as taught by Abrams, that a sterilizable packaging composite can comprise a print layer to provide desired product information for a particular packaging end use and that a protective overcoat or lacquer layer can be provided over the print layer to protect the print layer during sterilization. Appellants traverse this statement. It appears that the only mention of the term "lacquer" in Abrams is in conjunction with the bonding of the second plastic film material to the metallic foil – see Claim 9 of Abrams. The printing is on the other side of the metallic foil in conjunction with the first plastic film material layer. The Examiner's description appears to be in error.

The entire prior art teachings of record have to be considered, particularly in prior art applied by the Examiner. The inner or second plastic layer in Abrams is only exemplified by polypropylene – there is no disclosure of any multiple plastic layers, let alone a coextrudate of two plastic layers. The Examiner has no basis in the record for not using the inner plastic layer of Abrams.

Abrams does not appear to address the problem of delamination during sterilization, or disclose or assert a solution to such problem.

The Examiner has written that, therefore, one having ordinary skill in the art at the time of the invention would have been motivated to include a print layer on either side of the polyester film taught by Ohtsuki et al. to provide desired product information or decorative properties, wherein the print layer is further

provided with a protective overcoat layer to protect the print layer during sterilization as taught by Abrams. The result is still not appellants' invention.

The Examiner has not factually established in the record a prima facie showing of obviousness of appellants' claimed invention.

Appellants request that the Board reverse this rejection of Claim 48.

#### (9) MISCELLANEOUS

Appellants request that the Board reverse the several rejections and the appealable objection.

A check in the amount of \$340.00 for the fee required by 37 C.F.R. 1.17(c) for the appeal brief is enclosed.

The (8) CLAIMS APPENDIX, that contains a copy of the claims involved in the appeal follows this signature page.

A request for an oral hearing and the appropriate fee (by check) therefore are being filed separately.

This Appeal Brief is being submitted in executed triplicate. A check in the amount of three hundred forty dollars (\$340.00) is enclosed to cover the fee due upon filing of this Appeal Brief.

In the event of any discrepancies regarding the fee, the Commissioner for Patents is hereby authorized to credit any overpayment or charge any additional fees to Deposit Account No. 06-1110.

Respectfully submitted,

11/10/04  
Date

Virgil H. Marsh  
Virgil H. Marsh  
Registration No. 23,083

Fisher, Christen & Sabol  
1725 K Street, N.W.  
Suite 1108  
Washington, D.C. 20006  
Tel: 202-659-2000  
Fax: 202-659-2015

## (8) CLAIMS APPENDIX

The claims involved in the appeal are:

Claim 30: A sterilizable composite film containing a barrier layer that is impermeable to water vapor and gases comprising a metal foil and on both sides of the barrier layer at least one functional layer, the composite film having a layer structure containing one on top of the other:

(a) a first functional layer containing a first plastic film that is a polyester or polyolefin or an extrusion layer of a polyolefin or one or more lacquer layers, or print and lacquer layers, or print layers;

(b) a metal foil, the first plastic film is (i) in direct contact with the metal foil or (ii) in direct contact with a layer of a bonding agent that is in direct contact with the metal foil or (iii) in direct contact with a layer of a laminate adhesive that is in direct contact with the metal foil; and

(c) a second functional layer consisting of a second plastic film selected from the group consisting of (i) a plastic consisting of coextruded polyamide layer/polypropylene layer where the polyamide layer is in direct contact with the polypropylene layer, and (ii) a plastic consisting of coextruded polyamide layer/polypropylene layer with at least one suitable or conventional plastic system additive in either or both of the polyamide layer and the polypropylene layer and where the polyamide layer is in direct contact with the polypropylene layer, the polyamide layer lies between the metal foil and the polypropylene layer, the polyamide layer is (1) in direct contact with the metal foil or (2) in direct contact with a layer of a bonding agent that is in direct contact with the metal foil or (3) in direct contact with a layer of a laminate adhesive that is in direct contact with the

metal foil, the coextruded polyamide layer/polypropylene has a bond of sufficient to prevent delamination thereof during sterilization.

Claim 31: The sterilizable composite film according to Claim 30, wherein the composite film having a layer structure, contains in sequence:

(a) the first functional layer containing the first plastic film that is a polyester;

(b) the metal foil; and

(c) the second functional layer that is the second plastic film that is the coextruded polyamide/polypropylene film.

Claim 32: The sterilizable composite film according to Claim 30, wherein the first functional layer (a) containing the first plastic film that is a polyester that is monoaxially or biaxially stretched.

Claim 33: The sterilizable composite film according to Claim 30, wherein the first functional layer (a) containing the first plastic film that is a polyester that is polyethylene terephthalate.

Claim 34: The sterilizable composite film according to Claim 30, wherein the composite film having a layer structure contains in sequence:

(a) one or more lacquer layers, or print and lacquer layers, or print layers;

(b) the metal foil; and

(c) the second plastic film that is the coextruded polyamide/polypropylene film.

Claim 35: The sterilizable composite film according to Claim 30, wherein the polyester film of layer (a) has a thickness of 8 to 25  $\mu\text{m}$ , the metal foil has a



thickness of 5 to 100  $\mu\text{m}$ , and the coextruded polyamide/polypropylene film has a thickness of 50 to 150  $\mu\text{m}$ .

Claim 36: The sterilizable composite film according to Claim 30, wherein the polyester film of layer (a) has a thickness of 10 to 18  $\mu\text{m}$ , the metal foil has a thickness of 7 to 25  $\mu\text{m}$  and the coextruded polyamide/polypropylene film has a thickness of 60 to 90  $\mu\text{m}$ .

Claim 37: The sterilizable composite film according to Claim 30, wherein the polyester film of layer (a) has a thickness of 12  $\mu\text{m}$ , the metal foil has a thickness of 7 to 15  $\mu\text{m}$  and the coextruded polyamide/polypropylene has a thickness of 70 to 80  $\mu\text{m}$ .

Claim 38: The sterilizable composite film according to Claim 30, wherein the metal foil is an aluminum foil.

Claim 39: The sterilizable composite film according to Claim 30, wherein the metal foil is an aluminum foil of pure aluminum.

Claim 40: The sterilizable composite film according to Claim 30, wherein the metal foil is an aluminum foil or an aluminum alloy selected from the group consisting of AlMn, AlFeMn, AlFeSi and AlFeSiMn.

Claim 41: The sterilizable composite film according to Claim 40, wherein the aluminum alloy has a purity of 97.5 percent or higher.

Claim 42: The sterilizable composite film according to Claim 41, wherein the aluminum alloy has a purity of 98.5 percent or higher.

Claim 43: The sterilizable composite film according to Claim 30, wherein the metal foil is pretreated with a primer on one or both sides.

Claim 44: The sterilizable composite film according to Claim 30, wherein a bonding agent and/or laminate adhesive is provided between the metal foil (b) and the second functional layer (c).

Claim 45: A pouch for packaging, made from the sterilizable composite film according to Claim 30.

Claim 46: The sterilizable composite film according to Claim 30, wherein, in first functional, layer (a), the polyester is a polyalkylene terephthalate or polyalkylene isophthalate with the alkylene groups or radicals having 2 to 10 carbon atoms or alkylene groups having 2 to 10 carbon atoms that are interrupted by at least one  $-O-$ .

Claim 47: The sterilizable composite film according to Claim 46, wherein the polyester is polypropylene terephthalate.

Claim 48: The sterilizable composite film according to Claim 30, wherein the first functional layer (a), is a polyester, a printed image is printed on the outside of the polyester layer and a lacquer coating covers the image.